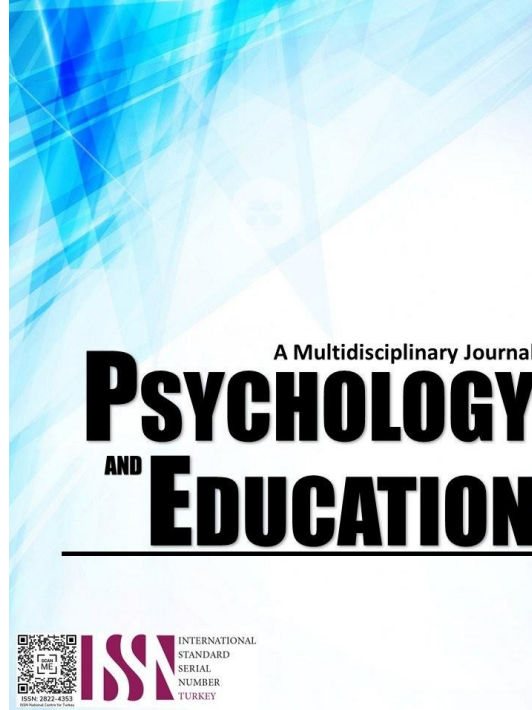


ACCEPTABILITY AND MARKETABILITY OF CUSQCA ICE CREAM CONE



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Acceptability and Marketability of CUSQCA Ice Cream Cone

Ricael Mae F. Omero*

For affiliations and correspondence, see the last page.

Abstract

This study focused on the acceptability and marketability of CUSQCA (Cucumber, Squash, and Carrot) Ice Cream Cone with 30 grams, 60 grams, and 90 grams proportion to the group of consumers, ice cream cone sellers and ice cream cone makers of Barangay Sta. Cruz, Antipolo City, and Marikina Polytechnic College, Marikina City during the school year 2022-2023. The study utilized the experimental method which involves a total of 90 respondents from the group of consumers, ice cream cone sellers, and ice cream cone makers who were determined through purposive sampling. Based on the findings, the consumers, ice cream cone sellers, and ice cream cone makers evaluated the acceptability level of the CUSQCA Ice Cream Cone with 30 and 60 grams proportion in terms of appearance, aroma, taste, and texture as Very Acceptable (VA), while they evaluated the 90 grams proportion as Extremely Acceptable. In addition, the three groups of respondents evaluated the level of marketability of CUSQCA Ice Cream cone with 30 grams proportion as Very High Potential (VHP). Comments and suggestions were provided by the respondents to further improve the product.

Keywords: *acceptability, marketability, ice cream cone*

Introduction

Achieving a healthy lifestyle is becoming more popular every day. It is one benefit brought by the pandemic. Many changed their lifestyle and eating habits. Many people used their extra time at home to achieve a healthy and strong body. This resulted in people finding other alternative food products that have better nutritional value even for sweet products like desserts. Ice creams are a sweet sensation that is very popular in the world. According to the blog from Nature's Organic Ice Cream (2020), there are seven ways to eat and enjoy an Ice Cream. People can enjoy it as a sandwich, on a plate with a special flavored waffle, inside a Mochi, mixed in a milkshake, in a coffee, as floats, and even in a personal bowl. Actually, there is an eighth option; one can enjoy the delight of ice cream by using the classic Ice Cream Cone.

According to the article written by Geraldine Campbell (December 17, 2019), putting ice cream in a cone is the perfect way to eat it. A cone is the ideal vehicle to identify the smell of the ice cream since there are olfactory receptors behind the nose and in the mouth. She also emphasized that by using a cone, the tongue can get the perfect amount of ice cream to taste it better. The use of cones promotes zero waste as you can eat it alongside the ice cream which can add another dimension to eating this sweet dessert.

Together with all those mentioned benefits of using a cone, new flavors, and new techniques are being developed nowadays to make and produce healthy ice

cream without compromising its taste value. This scenario motivated the researcher to reinvent and find an alternative raw ingredient that can be used in ice cream cone making which can be tasty, crispy, and healthy at the same time. This research was from the idea of the researcher to produce an ice cream cone that uses vegetables and fruits but still qualifies to the standards of a classic ice cream cone that all age groups can enjoy. The use of cucumber, squash, and carrot powder in the cone production gives the possibility of creating something that everybody would love to eat, affordable, and good for their health.

It was mentioned from one of Joy Cone's blogs (Joy Cone, 2022), that three significant types of cones are circulating in the market. Each has its own distinct flavor, texture, and ingredients. Waffle cones are medium to deep caramel brown in color, sugar-like flavor, and pointed cones with a crispy texture. Cake cones are light to golden-brown, their flavor is neutral, and their shape is wafer-like with a crisp texture. This type of cone is perfect for kids because it has a flat bottom. Cake cones have the subtlest flavor of all the cones and pair well with any ice cream flavor. Sugar cones are made with brown sugar for a sweeter, more delicious taste. Like waffle cones, sugar cones have a pointed tip. However, unlike the waffle cone, sugar cones have a flat top.

In this research, the researcher reinvented the waffle cones minimizing the use of sugar as flavoring to fully attain the goal of the research which is to create a healthier choice of an ice cream cone. According to the article, Nutritional Composition and Antioxidant Properties of Fruits and Vegetables authored by Diaz

et al. (2020), summer squash has several nutritive values, and some are attributed to their bioactive compounds, contributing positively to the daily nutritional intake. Consumption of Summer Squash can help the body in protecting against some diseases, including diabetes, cardiovascular diseases, accelerated aging, and some types of cancer. Additionally, squash is a good source of magnesium, calcium, iron, vitamin A, and vitamin B6.

Another important ingredient that was included to increase the product's nutritional value and flavor is the carrot, specifically in powdered form. Carrots were first used for medical purposes and gradually used as food. Carotenoids and anthocyanins are the major antioxidant pigments found in carrots that can help in anti-cancer activity once consumed. Compared to other vegetables, carrots can provide significant amounts of vitamin A due to the high bioavailability of carrot carotenoids. They are also rich in other phenols, including chlorogenic, caffeic, and p-hydroxybenzoic acids along with numerous cinnamic acid derivatives according to Singh (2021).

Cucumber (*Cucumis sativus*) has been cultivated and used in therapeutic medicine and beauty culture applications since ancient times. It is also a rich source of important nutrients and bioactive compounds. Given that fact, the researcher added Cucumber powder as one of the additional ingredients in the making of the ice cream cone. This vegetable crop is rich in polyphenolics and other phytochemicals that are known to be good antioxidant, anti-carcinogenic, anti-hyaluronidase, anti-elastase, hypolipidemic, anti-inflammatory, antihyperglycemic, diuretic, amylolytic, antimicrobial, and analgesic. Also, cucumber has a very low-calorie content as furtherly mentioned by Lakmini (2020). With all the mentioned health benefits of the aforementioned ingredients, the researcher views this new Ice Cream Cone as a new delight that consumers will embrace and appreciate. It can now be seen as a good addition to the consumer's diet.

Research Questions

This study focused on the acceptability and marketability of CUSQCA (Cucumber, Squash, Carrot) Ice Cream Cone with 30 grams, 60 grams, and 90 grams proportions to the group of consumers, ice cream cone sellers, and ice cream cone makers of Barangay Sta. Cruz, Antipolo City, and Marikina Polytechnic College, Marikina City during the school year 2022-2023. More specifically, the study sought answers to the following:

1. How did the Consumers, Ice Cream Cone Sellers, and Ice Cream Cone Makers evaluate the level of acceptability of the CUSQCA Ice Cream Cone in terms of the following criteria?
 - 1.1 Appearance;
 - 1.2 Aroma;
 - 1.3 Taste; and
 - 1.4 Texture?
2. Were there significant differences among the evaluations of the three groups of respondents on the level of acceptability of CUSQCA Ice Cream Cone utilizing the three different proportions in terms of the above-mentioned criteria?
3. What was the level of marketability of the CUSQCA Ice Cream Cone with the three different proportions as evaluated by the three groups of respondents in terms of the following?
 - 3.1 Production cost;
 - 3.2 Supply availability; and
 - 3.3 Consumer demand?
4. Were there any significant differences among the evaluations of the three groups of respondents on the level of marketability of the CUSQCA Ice Cream Cone in terms of the abovementioned criteria?
5. What was the physicochemical analysis of the CUSQCA Ice Cream Cone with cucumber, squash, and carrot powder in terms of the following parameters?
 - 5.1 Carbohydrates;
 - 5.2 Moisture;
 - 5.3 Potential of Hydrogen (pH); and
 - 5.4 Protein?
6. What comments and suggestions were offered by the three groups of respondents to improve the product?

Literature Review

As written by Dalal (2018), ice cream cones are made with simple ingredients like sugar, flour, and other flavorings. They are described as thin wafer biscuits which are rolled into a conical shape. Dalal specified that good ice cream cones must be free from moisture, have a nice crisp and crunch, and do not have any holes in them. Producing a waffle cone is tricky and requires practice, as claimed by Parks (2023) in her article titled "Waffle Cone Recipe". One of the most challenging parts of producing this product is the shaping since there is only a very small window of opportunity to shape the cone before they cool down. Aside from the time window, proper heat management is also needed to achieve the ideal sensory qualities of the cone. For a nice crisp and color, Parks recommended cooking the cone in 85 seconds at 300°F

(150°C). In addition, waffle cones are highly vulnerable to air and humidity, due to this, fixing them in an airtight container right away is truly important.

There is also a notable journal blog written by Warren (2020) which discussed that Squashes are rich in vitamin A in the form of antioxidant beta carotene, also supplies antioxidant vitamin C, blood pressure-lowering, potassium, and plenty of fiber. Similar to squash, carrots also contain a lot of valuable nutrients for the body. According to Ware (2022), Carrots are rich in vitamin A which is good for vision, antioxidants lutein, and zeaxanthin which help prevent age-related macular degeneration (a type of vision illness). Another antioxidant that carrots provide is vitamin C which that is integral to immune system function.

Relatively, it was said in the book titled “Cucumber Economic Values and Its Cultivation and Breeding” written by Wang et. al (2021) that Cucumber is traditionally used in folk medicine to treat diseases such as diarrhea, diabetes, and hypertension. Cucumbers consist mostly of water in which numerous electrolytes and phytochemicals are saturated. Cucumbers' distinctive chemical composition is regarded to have several potential health benefits. Cucumber phytoconstituents are proven to possess anti-inflammatory, antioxidant, and cancer-preventive qualities.

Another comparable study was conducted by Pulungan et al. (2020) titled “Utilization of Corn Flour (*Zea Mays L.*) as Material Substitution for Ice Cream Cone.” This study was conducted because there was an increasing need for Wheat flour in Indonesia. Having said that, wheat flour substitution is a must. To make cones with the best physical, chemical, and consumer acceptance qualities (such as rendement, thickness, breakability, and endurance to ice cream), this study aimed to determine the appropriate quantity of maize flour substitution from wheat flour. In addition, a new healthy drink has been innovated from the study conducted by Prasad (2021) entitled “Development, Analysis and Sensory Evaluation of Carrot Squash as a Natural Health Drink.” This study aimed to innovate a nutritious drink that can cater to all age groups. In the said research, carrots and squash were used to prepare a natural health drink that became a rich source of vitamin A and antioxidants. In the preparation of the said drink, the three ingredient variations utilized were honey, sugar, and jagger. Statistically, the sugar syrup-based "Code-II" squash was determined as highly acceptable among the three squashes.

Notable research was also conducted by Panso (2021) with the title “Acceptability and Marketability of Ice Cream with Carrot, Cucumber, and Orange.” In the specific study, the food technology experts, and ice cream makers found Ice Cream with Carrot, Cucumber and Orange as Very Agreeable and Extremely Agreeable respectively. Furthermore, a study titled “Ice Cream Cone out of Sweet Potato, Cassava and Purple Yam Powder (POCAYA)” was conducted by Segovia (2020). The respondents were TLE teachers, TLE cookery students, and selected parents of San Jose National High School. The respondents evaluated the level of acceptability of the Ice Cream Cone in terms of its appearance, aroma, color, taste and texture, as well as its level of marketability in terms of production cost, supply availability, and consumer demand.

Methodology

This study utilized the experimental method. According to Cherry (2022), in the experimental method, researchers identify and define key variables, formulate a hypothesis, manipulate the variables and collect data on the results. Extraneous variables are carefully controlled to minimize a potential impact on the outcome of the experiment. Carpi (2019) stated that experimentation is a research method in which one or more variables are consciously manipulated and the outcome or effect of that manipulation on other variables is observed. It often makes use of controls that provide a measure of variability within a system and a check for sources of error and are commonly applied to determine causal relationships or to quantify the magnitude of response of a variable. The researcher deemed the experimental method appropriate since the evaluation of the CUSQCA Ice Cream Cone in terms of appearance, aroma, taste, texture and its marketability will be determined.

Participants of the Study

The data gathered in this research were from thirty (30) Consumers, thirty (30) Ice Cream Cone Sellers, and thirty (30) Ice Cream Cone Makers of Barangay Sta. Cruz, Antipolo City and Marikina Polytechnic College, Marikina City during the school year 2022-2023 who evaluated the the CUSQCA Ice Cream Cone.

Instruments of the Study

A survey questionnaire/checklist was administered to determine the acceptability and marketability of the CUSQCA Ice Cream Cone with 30 grams, 60 grams,



and 90 grams of Cucumber, Squash, and Carrot powder. The product was evaluated in terms of its sensory attributes in terms of appearance, aroma, taste, texture, as well as its marketability. A Nine-point Hedonic Rating Scale with verbal interpretation was used as follows. A Four-point Likert Rating Scale was utilized by the respondents to evaluate the level to which they conform or contradict the presented statement. It was employed in figuring out the marketability of the prepared CUSQCA Ice Cream Cone in three different proportions. The marketability was determined through the indicator production cost, supply availability, and consumer demand.

Procedures

The researcher of this study followed some procedures to achieve the objectives of this study. First, the researcher produced enough yield of CUSQCA Ice Cream Cone for the survey. Second, the survey questionnaire/checklist was created including the statement of the problem. The researcher presented the survey questionnaire to her research adviser for approval. The questionnaire has twenty-one (21) indicators which are related to the target respondents' evaluation about Ice Cream Cone. In the questionnaire, a Nine-point Hedonic Scale and Four-point Likert Rating Scale was used to determine the respondents' evaluation in each statement. The researcher asked different professionals to validate the survey questionnaire/checklist. After validation, the researcher prepared ninety copies; these were administered to the thirty (30) Consumers, thirty (30) Ice Cream Cone Sellers and thirty (30) Ice Cream Cone Makers from Barangay Sta. Cruz, Antipolo City, and Marikina Polytechnic College, Marikina City. The researcher gave the respondents the option of being anonymous. The researcher retrieved the questionnaires personally that were answered by the three groups of respondents. The records and data gathered from the validators and respondents were kept confidential. No individual identities were used and shown as part of the report and interpretation. After gathering the evaluations, the data was tallied, tabulated, and statistically treated for analysis and interpretation.

Ethical Considerations

Ethical considerations are necessary for research projects because all those involved have moral and legal rights. The researcher ensured that respondents' privacy was not violated without appropriate authorization and consent. The researcher did not cause any physical or emotional harm to those who took part in the study, and all information received

from the reviewers was acknowledged and presented accurately.

Results and Discussion

Evaluation of consumers, ice cream cone sellers and ice cream cone makers on the Level of Acceptability of the CUSQCA Ice Cream Cone with 30 grams, 60 grams, and 90 grams proportions

Table 1. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 30 Grams Proportion in terms of Appearance

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone is visually appetizing.	7.97	VA	7.93	VA	8.17	VA
2. The CUSQCA ice cream cone has a good conical shape.	8.30	VA	8.47	VA	8.27	VA
3. The CUSQCA Ice Cream Cone has even distribution of colors from cucumber, squash, and carrot Powder.	7.73	VA	7.73	VA	7.73	VA
Overall Weighted Mean	8.00	VA	8.04	VA	8.06	VA

The table reveals that the three groups of respondents evaluated the CUSQCA Ice Cream Cone with 30 grams proportion as Very Acceptable (VA) in terms of appearance with the overall weighted mean of 8.00 for consumers, 8.04 for Ice Cream Cone Sellers, and 8.06 for Ice Cream Cone Makers.

Overall, the results of the evaluation suggest that the CUSQCA Ice Cream Cone with 30 grams proportion is an appealing product that is well-received by consumers, ice cream cone sellers, and ice cream cone makers alike. The positive ratings across all indicators demonstrate that the product is a viable option for those looking for a visually appetizing and appealing ice cream cone.

It can be gleaned from the table 2 that the three groups of respondents have the same evaluation regarding the acceptability of the CUSQCA Ice Cream Cone with 30 grams proportion in terms of aroma, as it was evident in the overall weighted mean of 8.13 for consumers, 8.20 for ice cream cone sellers, and 8.04 for ice cream cone makers, verbally interpreted as Very Acceptable (VA).

This implies that the positive evaluation of the CUSQCA Ice Cream Cone with 30 grams proportion in terms of aroma by the three groups of respondents is



an indication of the product's strong market acceptability. The aroma of the product can be a significant factor in its overall appeal, and the positive ratings across all indicators suggest that the product is well-received by consumers, ice cream cone sellers, and ice makers.

Table 2. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 30 Grams Proportion in terms of Aroma

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone has an appetizing smell.	7.90	VA	8.00	VA	7.97	VA
2. The CUSQCA Ice Cream has a distinctive aroma.	8.30	VA	8.27	VA	7.87	VA
3. The CUSQCA Ice Cream has a waffle-like aroma.	8.20	VA	8.33	VA	8.30	VA
Overall Weighted Mean	8.13	VA	8.20	VA	8.04	VA

Table 3. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 30 Grams Proportion in terms of Taste

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone tastes delectable.	8.10	VA	8.07	VA	8.10	VA
2. The CUSQCA Ice Cream has a well-blended flavor.	8.23	VA	8.17	VA	8.20	VA
3. The CUSQCA Ice Cream has a long-lasting flavor.	8.10	VA	8.30	VA	8.03	VA
Overall Weighted Mean	8.14	VA	8.18	VA	8.11	VA

As displayed in the table, the consumers, ice cream cone sellers, and ice cream cone makers evaluated the CUSQCA Ice Cream Cone with 30 grams proportion as Very Acceptable (VA). It was evident in the overall weighted mean of 8.14 for consumers, 8.18 for ice cream cone sellers, and 8.11 for ice cream cone makers.

These results imply that the product has a very acceptable taste for an Ice Cream Cone. This is an important indication in the product's acceptability in the market as its taste can be a significant factor in influencing the consumer's decisions.

As shown in Table 4, the ice cream cone sellers evaluated the acceptability of the CUSQCA Ice Cream

Cone with 30 grams proportion of cucumber, squash, and carrot in terms of texture as Extremely Acceptable (EA) with an overall weighted mean of 8.52. Moreover, the group of consumers, and ice cream cone makers evaluated the texture of the ice cream cone as Very Acceptable (VA) with an overall weighted mean of 8.39 and 8.42, respectively.

Table 4. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 30 Grams Proportion in terms of Texture

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone is crispy.	8.67	EA	8.57	EA	8.67	EA
2. The CUSQCA Ice Cream has the strength to hold a scoop of an ice cream.	8.03	VA	8.43	VA	8.07	VA
3. The CUSQCA Ice Cream cone is brittle when bitten.	8.47	VA	8.57	EA	8.53	EA
Overall Weighted Mean	8.39	VA	8.52	EA	8.42	VA

These results show that the three groups of respondents are in accord with the three indicators and approve of the CUSQCA ice cream cone's texture. Additionally, the texture of the CUSQCA Ice Cream Cone provides a great eating experience and customer satisfaction which is a great advantage.

Table 5. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 60 Grams Proportion in terms of Appearance

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone is visually appetizing.	7.97	VA	7.87	VA	8.30	VA
2. The CUSQCA ice cream cone has a good conical shape.	8.40	VA	8.53	EA	8.50	EA
3. The CUSQCA Ice Cream Cone has even distribution of colors from cucumber, squash, and carrot Powder.	8.13	VA	8.03	VA	8.07	VA
Overall Weighted Mean	8.17	VA	8.14	VA	8.29	VA

As revealed in the table, the three groups of respondents evaluated the appearance of the CUSQCA Ice Cream Cone with 60 grams of cucumber, squash, and carrots as Very Acceptable (VA) with an overall weighted mean of 8.17 for consumers, 8.14 for ice cream cone sellers, and 8.29 for ice cream cone makers.



These imply that the three groups of respondents were very satisfied with the overall appearance of the CUSQCA Ice Cream Cone. It also indicates that the product has an appealing feature that greatly satisfies the three groups of respondents.

Table 6. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 60 Grams Proportion in terms of Aroma

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone has an appetizing smell.	8.00	VA	8.10	VA	8.07	VA
2. The CUSQCA Ice Cream Cone has a distinctive aroma.	8.47	VA	8.40	VA	8.10	VA
3. The CUSQCA Ice Cream Cone has a waffle-like aroma.	8.33	VA	8.43	VA	8.47	VA
Overall Weighted Mean	8.27	VA	8.31	VA	8.21	VA

As gleaned from Table 9, the three groups of respondents evaluated the CUSQCA Ice Cream Cone with 60 grams proportion as Very Acceptable (VA) with the overall weighted mean of 8.27 for consumers, 8.31 for ice cream cone sellers, and 8.21 for ice cream cone makers.

The findings imply that the CUSQCA Ice Cream Cone has an acceptable and distinctive aroma.

Table 7. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 60 Grams Proportion in terms of Taste

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone tastes delectable.	8.33	VA	8.23	VA	8.33	VA
2. The CUSQCA Ice Cream has a well-blended flavor.	8.37	VA	8.27	VA	8.37	VA
3. The CUSQCA Ice Cream has a long-lasting flavor.	8.40	VA	8.40	VA	8.03	VA
Overall Weighted Mean	8.37	VA	8.30	VA	8.24	VA

The table revealed that the consumers, ice cream cone sellers, and ice cream cone makers have the same level of evaluation on the acceptability of CUSQCA Ice Cream Cone with 60 grams proportion in regard to taste as evident in the overall weighted mean of 8.37, 8.30, and 8.24, respectively, verbally interpreted as Very Acceptable (VA).

The findings signify that the three groups of respondents agree that the cone is delectable, well-blended, and has a long-lasting flavor.

Table 8. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 60 Grams Proportion in terms of Texture

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone is crispy.	8.77	EA	8.77	EA	8.70	EA
2. The CUSQCA Ice Cream has the strength to hold a scoop of an ice cream.	8.10	VA	8.60	EA	8.17	VA
3. The CUSQCA Ice Cream cone is brittle when bitten.	8.60	EA	8.57	EA	8.57	EA
Overall Weighted Mean	8.49	VA	8.64	EA	8.48	VA

As shown in the table, the group of ice cream sellers evaluated the acceptability of CUSQCA Ice Cream Cone with 60 grams proportion as Extremely Acceptable (EA) with the overall weighted mean of 8.64 while the group of consumers and ice cream cone makers rated it as Very Acceptable (VA) with an overall weighted mean of 8.49 and 8.48, respectively.

The data show that the CUSQCA Ice Cream Cone with 60 grams proportion is favorable for the three groups of respondents in terms of texture. These findings suggest that the texture of the CUSQCA Ice Cream Cone is one of the strong points of the product.

Table 9. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 90 Grams Proportion in terms of Appearance

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone is visually appetizing.	8.20	VA	8.23	VA	8.27	VA
2. The CUSQCA ice cream cone has a good conical shape.	8.57	EA	8.87	EA	8.50	EA
3. The CUSQCA Ice Cream Cone has even distribution of colors from cucumber, squash, and carrot Powder.	8.33	VA	8.37	VA	8.17	VA
Overall Weighted Mean	8.37	VA	8.49	VA	8.31	VA

As gleaned from the table, Indicators 1 and 3 were evaluated by the three groups of respondents as Very Acceptable (VA). Meanwhile, Indicator 2 was rated as Extremely Acceptable (EA), which resulted in the overall weighted mean of 8.37 for consumers, 8.49 for



ice cream sellers, and 8.31 for ice cream makers, verbally interpreted as Very Acceptable (VA).

These findings imply that the respondents agree that the product is visually appetizing, has a good conical shape, and has an even distribution of colors from cucumber, squash, and carrot powder.

Table 10. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 90 Grams Proportion in terms of Aroma

Indicators	Consumers		Respondents Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone has an appetizing smell.	8.20	VA	8.40	VA	8.30	VA
2. The CUSQCA Ice Cream has a distinctive aroma.	8.60	EA	8.57	EA	7.97	VA
3. The CUSQCA Ice Cream has a waffle-like aroma.	8.67	EA	8.53	EA	8.53	EA
Overall Weighted Mean	8.49	VA	8.50	EA	8.27	VA

It was observable in the table that the group of ice cream sellers rated the CUSQCA Ice Cream Cone as Extremely Acceptable (EA) with a numerical interpretation of 8.50, while the group of consumers and ice cream cone makers evaluated the product as Very Acceptable (VA) with an overall weighted mean of 8.49 and 8.27, respectively, in terms of aroma.

It is clear from the table that there was not much of a difference between the three evaluations. These shows that the three groups of respondents are highly satisfied with the aroma of the CUSQCA Ice Cream Cone with 90 grams proportion.

Table 11. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 90 Grams Proportion in terms of Taste

Indicators	Consumers		Respondents Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone tastes delectable.	8.43	VA	8.53	EA	8.37	VA
2. The CUSQCA Ice Cream has a well-blended flavor.	8.63	EA	8.43	VA	8.60	EA
3. The CUSQCA Ice Cream has a long-lasting flavor.	8.60	EA	8.50	EA	8.33	VA
Overall Weighted Mean	8.56	EA	8.49	VA	8.43	VA

As presented in the table, the CUSQCA Ice Cream Cone with cucumber, squash, and carrot is evaluated as Extremely Acceptable (EA) by the consumers with an overall weighted mean of 8.56 and Very Acceptable (VA) by the ice cream cone sellers and ice cream cone makers with the overall weighted mean of 8.49 and 8.43, respectively.

In this regard, it implies from the table that the produced CUSQCA Ice Cream Cone meets the taste requirement of the three groups of respondents.

Table 12. Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with 90 Grams Proportion in terms of Texture

Indicators	Consumers		Respondents Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone is crispy.	8.83	EA	8.63	EA	8.83	EA
2. The CUSQCA Ice Cream has the strength to hold a scoop of an ice cream.	8.37	VA	8.67	EA	8.40	VA
3. The CUSQCA Ice Cream cone is brittle when bitten.	8.83	EA	8.60	EA	8.73	EA
Overall Weighted Mean	8.68	EA	8.63	EA	8.66	EA

The table shows that the three groups of respondents evaluated the level of acceptability of CUSQCA Ice Cream Cone with 90 grams proportion in terms of texture as Extremely Acceptable (EA) with the overall weighted mean of 8.68, 8.63, and 8.66, respectively.

These findings show that all respondents have agreed that the CUSQCA Ice Cream Cone is crispy, has the strength to hold a scoop of ice cream, and is brittle when bitten.

Significant differences among the Evaluations of the Three Groups of Respondents on the Level of Acceptability of CUSQCA Ice Cream Cone Utilizing the Three Different Proportions.

Table 13. Analysis of Variance of Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with Different Proportions in terms of Appearance

P	Source of Variation	df	SS	MS	F _{computed} Value	F _{critical} Value (α=5%)	Decision	Interpretation
30g	Between Groups	2	0.052	0.026	0.03	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	65.959	0.758				
60g	Between Groups	2	0.363	0.181	0.38	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	42.037	0.483				
90g	Between Groups	2	0.496	0.248	0.57	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	37.559	0.432				



As shown in Table 19, the computed F values are 0.03, 0.38, and 0.57, and the critical F Value is 3.10 with 2 and 87 degrees of freedom. The computed F values are lesser than the critical F value. This implies that the null hypothesis cannot be rejected at 5% significance level. This supports that there are no significant differences among the evaluations of the three groups of respondents on the acceptability level of CUSQCA Ice Cream Cone with 30 grams, 60 grams, and 90 grams proportion in respect to appearance.

This concludes that the evaluations of the three groups of respondents on the acceptability level of the CUSQCA Ice Cream Cone in three different proportions in terms of appearance are similar. Moreover, it can be inferred that the appearance of the CUSQCA Ice Cream Cone is equally acceptable for the three groups of respondents, regardless of the proportion used.

As revealed in the next table, the computed F values of 0.31, 0.16 and 1.40 are lesser than the critical F value of 3.10. Thus, at a 5% level of significance the statistical decision is to fail to reject the null hypothesis. As a result, there are no significant differences among the evaluations of the three groups of respondents on the level of acceptability of CUSQCA Ice Cream Cone with 30 grams, 60 grams, and 90 grams proportions in terms of aroma.

Table 14. *Analysis of Variance of Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with Different Proportions in terms of Aroma*

P	Source of Variation	df	SS	MS	F _{computed} Value	F _{critical} Value (α=5%)	Decision	Interpretation
30g	Between Groups	2	0.365	0.183	0.31	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	50.874	0.585				
60g	Between Groups	2	0.151	0.075	0.16	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	41.959	0.482				
90g	Between Groups	2	1.040	0.520	1.40	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	32.196	0.370				

This finding suggests that the aroma of CUSQCA Ice Cream Cone with 30 grams, 60 grams, and 90 grams proportions is similarly acceptable to the three groups of respondents. It implies that the product's aroma is consistent across the different proportions and does not significantly affect the overall acceptability of the product.

The table 15 displayed that the computed F values of

0.04, 0.24 and 0.34 are smaller than the critical F value of 3.10. Consequently, at the significance level of 5%, the statistical decision is not to reject the null hypothesis. This data shows that there are no significant differences among the evaluations of the three groups of respondents on the acceptability level of CUSQCA Ice Cream Cone with 30 grams, 60 grams and 90 grams proportions with respect to taste.

Table 15. *Analysis of Variance of Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with Different Proportions in terms of Taste*

P	Source of Variation	df	SS	MS	F _{computed} Value	F _{critical} Value (α=5%)	Decision	Interpretation
30g	Between Groups	2	0.067	0.033	0.04	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	65.944	0.758				
60g	Between Groups	2	0.225	0.112	0.24	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	41.474	0.477				
90g	Between Groups	2	0.225	0.112	0.34	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	28.493	0.328				

These findings signify that the respondents' evaluations with regard to the CUSQCA Ice Cream Cone's acceptability level in three different proportions are alike.

Table 16. *Analysis of Variance of Respondents' Evaluations on the Acceptability Level of CUSQCA Ice Cream Cone with Different Proportions in terms of Texture*

P	Source of Variation	df	SS	MS	F _{computed} Value	F _{critical} Value (α=5%)	Decision	Interpretation
30g	Between Groups	2	0.289	0.144	0.45	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	28.156	0.324				
60g	Between Groups	2	0.521	0.260	1.07	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	21.189	0.244				
90g	Between Groups	2	0.030	0.015	0.07	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	17.848	0.205				

As described in the table, the computed F values of 0.45, 1.07 and 0.07 are below the critical F value of 3.10. This concludes that the null hypothesis cannot be rejected at 5% level of significance. Therefore, there are no significant differences among the evaluations of the three groups of respondents on the acceptability level of CUSQCA Ice Cream Cone containing 30 grams, 60 grams and 90 grams proportions with regard to texture.

This concludes that the three groups of respondents have the same evaluation on the CUSQCA Ice Cream Cone in three different proportions in terms of texture.



Evaluation of the Three Groups of Respondents on the Level of Marketability of the CUSQCA Ice Cream Cone with 30 grams, 60 grams, and 90 grams proportions

Table 17. Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with 30 Grams Proportion with respect to Production Cost

Indicators	Consumers		Respondents Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. Producing the CUSQCA Ice Cream Cone is affordable.	3.70	VHP	3.57	VHP	3.60	VHP
2. The CUSQCA Ice Cream Cone can compete with commercial ice cream cone brands.	3.47	HP	3.00337	HP	3.43	HP
3. The CUSQCA Ice Cream Cone is economical.	3.33	HP	3.37	HP	3.57	VHP
Overall Weighted Mean	3.50	VHP	3.43	HP	3.53	VHP

The table shows that the groups of consumers and ice cream cone makers obtained an overall weighted mean of 3.50 and 3.53, respectively, with a verbal interpretation of Very High Potential (VHP). Meanwhile, ice cream sellers rated the product as 3.43 with a verbal interpretation of High Potential (HP).

This implies that the CUSQCA Ice Cream Cone with 30 grams proportion is affordable, can compete with commercial ice cream cone brands, and is economical. Furthermore, the data suggest that the market is receptive to products that incorporate healthy ingredients such as vegetables in ice cream cones. Furthermore, the positive evaluations from the respondents suggest that there is a demand for healthier alternatives to traditional ice cream cones.

Table 18. Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with 30 Grams Proportion with respect to Supply Availability

Indicators	Consumers		Respondents Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone ingredients are always available in the market.	3.67	VHP	3.67	VHP	3.77	VHP
2. The CUSQCA Ice Cream Cone ingredients can be produced easily.	3.77	VHP	3.63	VHP	3.70	VHP
3. The powdered ingredients used in making CUSQCA cone have a longer shelf life.	3.40	HP	3.50	VHP	3.67	VHP
Overall Weighted Mean	3.61	VHP	3.60	VHP	3.71	VHP

It can be gleaned from the table that the evaluations of the three groups of respondents on the level of marketability of CUSQCA Ice Cream Cone with 30 grams proportion regarding supply availability are Very High Potential (VHP) as seen from the overall weighted mean of 3.61 for consumers, 3.60 for ice cream cone sellers, and 3.71 for ice cream cone makers.

Though the verbal interpretation differs, it is clear from the data that the difference among the ratings is minimal. It implies that the respondents all agree that there is enough supply and sustainable production of the ingredients used in making CUSQCA Ice Cream Cone.

Table 19. Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with 30 Grams Proportion with respect to Consumer Demand

Indicators	Consumers		Respondents Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone can meet the demands of the consumers.	3.40	HP	3.57	VHP	3.40	HP
2. The CUSQCA Ice Cream Cone can give consumers health benefits.	3.60	VHP	3.63	VHP	3.67	VHP
3. It can compete with other Ice Cream Cones that are available in the market.	3.40	HP	3.63	VHP	3.50	VHP
Overall Weighted Mean	3.47	HP	3.61	VHP	3.52	VHP

It can be gleaned from the table that the consumers rated the level of marketability of CUSQCA Ice Cream Cone with 30 grams proportion in terms of consumer demand as High Potential (HP) with an overall weighted mean of 3.47, while ice cream cone sellers and ice cream cone makers rated it as Very High Potential (VHP) with an overall weighted mean of 3.61 and 3.52, respectively.

The data indicate that the respondents appreciated the product and can possibly meet the demands of the market.

It is perceptible from the table 20 that in terms of production cost, CUSQCA Ice Cream Cone with 60 grams proportion has Very High Potential (VHP) as evaluated by consumers with an overall weight mean of 3.54 and ice cream makers with an overall weighted mean of 3.59. On the other hand, ice cream sellers evaluated it as High Potential (HP) with an overall weighted mean of 3.48.



Table 20. Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with 60 Grams Proportion with respect to Production Cost

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. Producing the CUSQCA Ice Cream Cone is affordable.	3.70	VHP	3.63	VHP	3.60	VHP
2. The CUSQCA Ice Cream Cone can compete with commercial ice cream cone brands.	3.50	VHP	3.40	HP	3.57	VHP
3. The CUSQCA Ice Cream Cone is economical.	3.43	HP	3.40	HP	3.60	VHP
Overall Weighted Mean	3.54	VHP	3.48	HP	3.59	VHP

The data also showed that the three groups of respondents rated Indicator 1 as Very High Potential (VHP), which implies that all groups agreed that CUSQCA Ice Cream Cone is affordable.

The next table presented the evaluations of the three groups of respondents on the level of marketability of CUSQCA Ice Cream Cones with 60 grams proportion in terms of supply availability as 3.64 for consumers, 3.62 for ice cream cone sellers, and 3.71 for ice cream cone makers which verbally interpreted as Very High Potential (VHP).

Table 21. Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with 60 Grams Proportion with respect to Supply Availability

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone ingredients are always available in the market.	3.67	VHP	3.70	VHP	3.77	VHP
2. The CUSQCA Ice Cream Cone ingredients can be produced easily.	3.80	VHP	3.67	VHP	3.70	VHP
3. The powdered ingredients used in making CUSQCA cone have a longer shelf life.	3.47	HP	3.50	VHP	3.67	VHP
Overall Weighted Mean	3.64	VHP	3.62	VHP	3.71	VHP

The findings imply that all three groups of respondents agree that the production of the CUSQCA Ice Cream Cone can be consistently supplied.

The table 22 shows that with an overall weighted mean of 3.66 and 3.53, ice cream cone sellers, and ice cream

cone makers evaluated the level of marketability of CUSQCA Ice Cream Cone with 60 grams proportion in terms of consumer demand as Very High Potential (VHP), while with 3.49 overall weighted mean, consumers rated the product as High Potential (HP).

Table 22. Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with 60 Grams Proportion with respect to Consumer Demand

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone can meet the demands of the consumers.	3.37	HP	3.63	VHP	3.47	HP
2. The CUSQCA Ice Cream Cone can give consumers health benefits.	3.67	VHP	3.70	VHP	3.60	VHP
3. It can compete with other Ice Cream Cones that are available in the market.	3.43	HP	3.63	VHP	3.53	VHP
Overall Weighted Mean	3.49	HP	3.66	VHP	3.53	VHP

This implies that the three groups of respondents are satisfied with the level of marketability of CUSQCA Ice Cream Cone with 60 grams proportion with regard to consumer demand.

Table 23. Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with 90 Grams Proportion with respect to Production Cost

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. Producing the CUSQCA Ice Cream Cone is affordable.	3.70	VHP	3.60	VHP	3.50	VHP
2. The CUSQCA Ice Cream Cone can compete with commercial ice cream cone brands.	3.63	VHP	3.50	VHP	3.47	HP
3. The CUSQCA Ice Cream Cone is economical.	3.47	HP	3.53	VHP	3.60	VHP
Overall Weighted Mean	3.60	VHP	3.54	VHP	3.52	VHP

As described in the table, the evaluation of consumers, ice cream cone sellers, and ice cream cone makers on the level of marketability of CUSQCA Ice Cream Cone with 90 grams proportion in respect to production cost can be verbally interpreted as Very High Potential (VHP) with an overall weighted mean of 3.60, 3.54, and 3.52, respectively.

The findings show that the three groups of respondents



equally agree with the product's potential in the market regarding production cost. It can be inferred that the CUSQCA Ice Cream Cone with 90 grams proportion has a competitive price and can compete with the commercial ice cream cone brands in the market.

Table 24. Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with 90 Grams Proportion with respect to Supply Availability

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone ingredients are always available in the market.	3.67	VHP	3.70	VHP	3.80	VHP
2. The CUSQCA Ice Cream Cone ingredients can be produced easily.	3.80	VHP	3.67	VHP	3.77	VHP
3. The powdered ingredients used in making CUSQCA cone have a longer shelf life.	3.53	VHP	3.50	VHP	3.70	VHP
Overall Weighted Mean	3.67	VHP	3.62	VHP	3.76	VHP

It can be gleaned from Table 24 that the three groups of respondents have similar evaluations on the level of marketability of CUSQCA Ice Cream Cone with 90 grams proportions with respect to supply availability as evident in the overall weighted mean of 3.67 for consumers, 3.62 for ice cream cone sellers, and 3.76 for ice cream cone makers, verbally interpreted as Very High Potential (VHP).

The data imply that in terms of supply availability, consumers, ice cream cone sellers, and ice cream cone makers highly agree that the ingredients required for the complete production of the ice cream cone are always available, produced easily, and have a longer-shelf life.

It can be depicted from the table 25 that the consumer, ice cream sellers, and ice cream cone maker respondents obtained an overall weighted mean of 3.60, 3.68, and 3.56 which signifies that the produced ice cream cone is Very High Potential (VHP).

These findings imply that 90 grams proportion in the CUSQCA Ice Cream Cone evidently and positively meets the demands of the market, provides health benefits, and can compete with other ice cream cones in the market.

Table 25. Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with 90 Grams Proportion with respect to Consumer Demand

Indicators	Respondents					
	Consumers		Sellers		Makers	
	WM	VI	WM	VI	WM	VI
1. The CUSQCA Ice Cream Cone can meet the demands of the consumers.	3.53	VHP	3.67	VHP	3.53	VHP
2. The CUSQCA Ice Cream Cone can give consumers health benefits.	3.77	VHP	3.70	VHP	3.60	VHP
3. It can compete with other Ice Cream Cones that are available in the market.	3.50	VHP	3.67	VHP	3.53	VHP
Overall Weighted Mean	3.60	VHP	3.68	VHP	3.56	VHP

Significant Differences Among the Evaluations of the Three Groups of Respondents on the Level of Marketability of CUSQCA Ice Cream Cone

Table 26. Analysis of Variance of Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with Different Proportions as to Production Cost

P	Source of Variation	df	SS	MS	F _{computed} Value	F _{critical} Value (α=5%)	Decision	Interpretation
30g	Between Groups	2	0.156	0.078	0.42	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	16.111	0.185				
60g	Between Groups	2	0.188	0.094	0.61	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	13.300	0.153				
90g	Between Groups	2	0.096	0.048	0.29	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	14.570	0.167				

It was observed in Table 26 that the computed F values of 0.42, 0.61, and 0.29 are lower than the critical F value of 3.10. Therefore, at a 5% level of significance, the statistical decision is to fail to reject the null hypothesis. This indicates that there are no significant differences among the evaluations of the three groups of respondents on the level of marketability of CUSQCA Ice Cream Cone with 30 grams, 60 grams, and 90 grams proportions in regard to production cost.

It can be declared that the three groups of respondents have the same evaluation on the CUSQCA Ice Cream Cone in terms of Production Cost.

Based on the data reflected from the table 27, the computed F values of 0.74, 0.45 and 1.03 are lesser than the critical F value of 3.10. Thereupon, the statistical decision is not to reject the null hypothesis at a 5% level of significance. This concludes that there are no significant differences on the evaluations of the



three groups of respondents on the marketability level of CUSQCA Ice Cream Cone with 30 grams, 60 grams, and 90 grams proportions in regard to supply availability.

Table 27. Analysis of Variance of Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with Different Proportions as to Supply Availability

P	Source of Variation	df	SS	MS	F _{computed} Value	F _{critical} Value (α=5%)	Decision	Interpretation
30g	Between Groups	2	0.225	0.112	0.74	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	13.159	0.151				
60g	Between Groups	2	0.128	0.064	0.45	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	12.533	0.144				
90g	Between Groups	2	0.277	0.138	1.03	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	11.704	0.135				

These findings mean that the evaluation of the consumers, ice cream cone sellers, and ice cream cone makers in regard to supply availability are alike. This implies that the availability of the ingredients and resource in producing the CUSQCA Ice Cream Cone is not a hindrance to its potential market success.

As summarized in the table 27, at 5% level of significance, the computed F values of 0.89, 1.33 and 0.70 are less than the critical F value of 3.10. This concludes that the null hypothesis cannot be rejected. Thus, there are no significant differences among the evaluations of the three groups of respondents on the marketability level of CUSQCA Ice Cream Cone with 30 grams, 60 grams and 90 grams proportions in regard to consumer demand.

Table 28. Analysis of Variance of Respondents' Evaluations on the Marketability Level of CUSQCA Ice Cream Cone with Different Proportions as to Consumer Demand

P	Source of Variation	df	SS	MS	F _{computed} Value	F _{critical} Value (α=5%)	Decision	Interpretation
30g	Between Groups	2	0.319	0.159	0.89	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	15.637	0.180				
60g	Between Groups	2	0.447	0.223	1.33	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	14.626	0.168				
90g	Between Groups	2	0.230	0.115	0.70	3.10	Fail to reject the H ₀	Not Significant
	Within Groups	87	14.270	0.164				

It concludes that the respondents' evaluation on the CUSQCA Ice Cream Cone in three different proportions are similar in terms of consumer demand.

The Physicochemical Analysis of the CUSQCA Ice Cream Cone with cucumber, squash, and carrot powder

Table 29. Summary of Physicochemical Analysis Result of CUSQCA Ice Cream Cone

Parameters	Unit	Test Method	Result	Remarks
Carbohydrates	g/100g	By computation	79.0	High energy
Moisture	g/100g	Vacuum Oven Drying	0.698	Low
pH (10% Dispersion)	--	Electrometry	5.96 @ 20.9°C	Low Acidity
Protein	g/100g	Kjeldhal	8.45	Within Range

The table revealed that in one-hundred grams of CUSQCA Ice Cream Cone with 90 grams proportion of cucumber, squash, and carrot powder, the carbohydrates content of 79.0 grams may produce high energy to the consumer. In addition, the moisture content of 0.698 implies that the microbial growth in the Ice Cream Cone is slow, and the possibility of mold and yeast formation is low. The pH in 10% dispersion is at 5.96 @ 20.9 °C, which concludes that the CUSQCA Ice Cream Cone contains low acid content. The protein content is within the given protein range for having 8.45 grams of protein in a 100 grams sample.

These findings reveal that the CUSQCA Ice Cream Cone satisfies the protein and carbohydrate standards established in the Philippine Reference Intake by FNRI-DOST and the moisture content described in the book "Protection of Foods by Drying: Modern Food Microbiology" Nevertheless, the product's acidity level can be increased to extend the cone's shelf life.

Comment and Suggestions Offered by the Three Groups of Respondents to Improve the Product

From the comments given by the three groups of respondents, it appeared that the CUSQCA Ice Cream Cone is a product that is highly recommended and has a high chance to be accepted in the market. Its conical shape, suitability for ice cream, and its taste makes the CUSQCA Ice Cream Cone an ideal choice for all consumers. Another factor that makes the CUSQCA Ice Cream Cone acceptable it is nutrient value. While the mention of cucumber powder resembling molds may be off putting, it is essential to note that the presence of cucumber in the CUSQCA Ice Cream Cone is important because it can provide several health benefits such as vitamins and minerals. Therefore, the presence of cucumber powder can be seen as a positive attribute that enhances the overall appeal of the CUSQCA Ice Cream Cone.

To improve the CUSQCA Ice Cream Cone, the three groups of respondents gave their suggestions alongside with the evaluation with regard to the acceptability and marketability level. One of the key improvements is to make the top hole wider for it to become more convenient for consumers to use. By adding food color and by reducing the sugar content in the CUSQCA Ice Cream Cone, the appearance and taste can be improved, and be more enticing to consumers. Furthermore, it is suggested to indicate the addition of the cucumber powder to the food label to recognize that it is not mold growth. This would help to dispel any concerns or confusion that consumers may have regarding the green spots on the CUSQCA Ice Cream Cone.

Conclusion

Based on the findings of the study, the following conclusion were drawn: (1) The 30 grams, 60 grams, and 90 grams proportion were all acceptable as evaluated by the three groups of respondents. Among the three proportions, 90 grams proportion was the most acceptable in terms of appearance, aroma, taste, and texture. (2) The evaluations of the three groups of respondents on the CUSQCA Ice Cream Cones in three different proportions did not exhibit any significant differences. (3) The market potential for the CUSQCA Ice Cream Cone with 30 grams, 60 grams and 90 grams proportions were very high. Furthermore, among the three, 90 grams proportions have the highest potential. (4) According to the statistical findings, the respondents' evaluations of the product's marketability were consistent and did not demonstrate any significant discrepancies. (5) The CUSQCA Ice Cream cone has a high carbohydrate content, little chance for microorganism growth based on its moisture content, low acidity, and an adequate amount of protein. Furthermore, the physicochemical analysis of the CUSQCA Ice Cream Cone with 90 grams meets the food standard.

Based on the abovementioned conclusions, the following recommendations are hereby presented: (1) The researcher, through the assistance of Marikina Polytechnic College, in collaboration with the DTI-Shared Service Facilities (SSF), should create a proposal for the market approval and production of CUSQCA Ice Cream Cone and the possible research grant from the Department of Science and Technology. (2) The CUSQCA Ice Cream Cone can be proposed to private manufactures or organizations for the possible partnership in terms of medium-scale and large-scale production. (3) It is recommended that the researcher

improve the product packaging and to include the nutrition facts of the product. (4) The future researchers can undertake further analysis on the microbial testing and shelf-life testing to comply with the mandated policies of the Food and Drug Administration. (5) The potential entrepreneurs can conduct further study on the CUSQCA Ice Cream Cone to comply with the standards set by the FNRI-DOST and Food and Drug Administration.

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Affiliations and Corresponding Information

Ricael Mae F. Omero

Marikina Polytechnic College – Philippines